UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,624	06/30/2003	Ya-Bing Chu	MS1-1500US	9379

22801   7590   07/09/2008
LEE & HAYES PLLC
421 W RIVERSIDE AVENUE SUITE 500
SPOKANE, WA 99201

EXAMINER
CHANG, JULIAN

ART UNIT	PAPER NUMBER
2152	

MAIL DATE	DELIVERY MODE
07/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)
Office Action Summary		10/615,624	CHU ET AL.
		Examiner	Art Unit	
		JULIAN CHANG	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 January 2008</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-74</u> is/are pending in the application.

     4a) Of the above claim(s) <u>71-74</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-70</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office action is responsive to communication filed on 01/25/08. Claims 1-74

are pending, of which, claims 1-70 have been examined below. Any rejections not

repeated below, including 101 and 112, have been withdrawn in view of applicant's

amendments.

Drawings

2.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show

every feature of the invention specified in the claims. Therefore, the method of claim 1

must be shown or the feature(s) canceled from the claim(s). No new matter should be

entered.

        Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in

reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next

Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

　　　　The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.　　　Claims 1-11, 15, 16, 18, 19 and 23-26 are rejected under 35 U.S.C. 103(a) as

being unpatentable over U.S. Pub. No. 2003/0069947 ("Lipinski"), and further in view of

U.S. Pub. No. 2004/0078708 ("Li"), U.S. Pub. No. 2003/0069992 ("Ramig"), U.S. Pat.

No. 6,560,648 ("Dunn"), and U.S. Pat. No. 6,012,088 ("Li2").

4.　　　Regarding claims 1 and 2, Lipinski teaches a method comprising:

　　　　connecting a device to a network service in a plurality of stages (Fig. 2);

　　　　wherein connecting in a plurality of stages includes:

　　　　　　　attempting to obtain IP settings via DHCP (Fig. 2, 207);

　　　　　　　if not successful, displaying status message (Fig. 2, 209), and

　　　　　　　querying a user for static IP settings (Fig. 2, 218);

　　　　　　　　　if IP settings obtained, performing a DNS name resolution (Fig. 2,

220); and

sending test data between the device and network service (Fig. 2, 223).

Lipinski fails to teach detecting a physical cable connection, displaying real-time status of each of the plurality of stages, including troubleshooting help if necessary. Li teaches detecting a physical cable connection (Fig. 2; para. [0039]), and displaying real-time status information (para. [0039]), including troubleshooting help (para. [0006]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to test for a physical cable connection in order to notify a user if the physical cable is not properly connected.

Lipinski fails to teach performing a DNS name resolution. Ramig teaches performing a DNS name resolution (para. [0047]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to perform a DNS name resolution in order to make sure the DNS is set up properly.

Lipinski fails to teach determining a QoS of a connection. Dunn teaches testing the latency of a connection (Col. 7, lines 50-67). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to test the QoS of a connection in order to determine the quality of the connection, and to verify the existence of a connection.

Lipinski fails to teach attempting different connection techniques until a stage is successful, and fails to teach attempting to connect using PPPoE if DHCP is not successful. Connecting to a network using DHCP and PPPoE were both very well known at the time of applicant's invention. In U.S. Pat. No. 6,012,088, Li, et al teaches a system for automatically configuring an Internet access device, including settings for

DHCP and PPP. Applicant has simply disclosed a system for applying a brute force

trial-and-error approach to connecting to a network. The Court has stated in a recent

decision that the combination of prior art elements according to known methods to yield

predictable results would have been obvious. MPEP 2143. Prior to applicant's

invention a user that fails to connect to a network via DHCP may well have tried to

connect via other known methods, including PPPoE. Applicant's invention has simply

automated this process, and cannot be considered novel. It would have been obvious

to one of ordinary skill in the art at the time of applicant's invention to attempt a different

technique after one fails in order to automate the process of connecting to a network.

5.   Regarding claim 3, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 1 above, including a communicative

coupling stage between the device and a network (Lipinski: 'IN USE?', Fig. 2).

6.   Regarding claim 4, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 1 above, including a network settings

stage for configuring one of a network protocol and a network address (Lipinski: 'GET

DHCP NETWORK SETTINGS', Fig. 2).

7.   Regarding claim 5, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 4 above, including a network settings

stage exists as an Internet Protocol (IP) settings stage and the network address exists

as an IP address (Lipinski: Fig. 2).

8.   Regarding claim 6, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 5 above, including one or more

techniques are attempted for completing an IP settings stage including one of a

dynamic host configuration protocol (DHCP) technique, a point-to-point protocol over

Ethernet (PPPoE) technique, and a bootstrap protocol (BOOTP) technique (Lipinski:

'DHCP', Fig. 2).

9.   Regarding claim 7, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 4 above, including a name resolution

stage for associating the network address to a network domain name (Lipinski: 'NEED

NAME SERVER?', Fig. 2).

10.   Regarding claim 8, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 7 above, including that a name

resolution stage exists as a domain name system (DNS) name resolution stage

(Lipinski: 'ENTER DNS', Fig. 2).

11.   Regarding claim 9, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 1 above, including a service connection

stage for confirming communication with the network service (Lipinski: 'TEST

NETWORK ACCESS', Fig. 2).

12.   Regarding claim 10, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 1 above, including proceeding

automatically between each of the multiple stages of connecting (Lipinski: para. [0023]).

13.   Regarding claim 11, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 1 above, including that real-time status

includes a message describing one of the plurality of stages (Li: para. [0039]).

14.   Regarding claim 15, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 1 above, including troubleshooting help

including instructions for completing one of the plurality of stages (Li: para. [0006]).

15.   Regarding claim 16, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 1 above, including the troubleshooting

help including instructions for completing a technique used to complete one of the

plurality of stages (Li: para. [0006]).

16.   Regarding claim 18 Lipinski-Li-Ramig-Dunn-Li2 teaches the invention
substantially as claimed and described in claim 46 above, including troubleshooting help
including an error log compiled during the connecting (Li: para. [0006], [0039]).

17.   Regarding claim 19, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention
substantially as claimed and described in claim 46 above, including troubleshooting help
including a stage during the connecting at which a failure occurred (Li: para. [0006],
[0039]).

18.   Regarding claim 23, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention
substantially as claimed and described in claim 1 above, including that a device
connects to a network service over the Internet (Lipinski: para. [0002]).

19.   Regarding claim 24, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention
substantially as claimed and described in claim 23, including a network settings stage
for configuring one of a network protocol for the Internet and an Internet Protocol
address (Lipinski: para. [0003]).

20.   Regarding claim 25, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention
substantially as claimed and described in claim 24 above, including that a dynamic host
configuration protocol (DHCP) technique is attempted to complete the network settings

stage and if the DHCP technique fails, then a point-to-point protocol over Ethernet (PPPoE) technique is automatically attempted to complete the network settings stage.

Connecting to a network using DHCP and PPPoE were both very well known at the time of applicant's invention. In U.S. Pat. No. 6,012,088, Li, et al teaches a system for automatically configuring an Internet access device, Including settings for DHCP and PPP. Applicant has simply disclosed a system for applying a brute force trial-and-error approach to connecting to a network. The Court has stated in a recent decision that the combination of prior art elements according to known methods to yield predictable results would have been obvious. MPEP 2143. Prior to applicant's invention a user that fails to connect to a network via DHCP may well have tried to connect via other known methods, including PPPoE. Applicant's invention has simply automated this process, and cannot be considered novel.

21.   Claims 12-14 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Li-Ramig-Dunn-Li2 as applied to claims 1 and 11 above, and further in view of U.S. Pub. No. 2002/0065941 ("Kaan").

22.   Regarding claim 12, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention substantially as claimed and described in claims 11 above, but fails to teach a message describing progress of a technique used to complete one of the plurality of stages.

Kaan teaches a message describing progress of a technique used to complete one of the plurality of stages (Kaan: paras [0072]-[0073]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include a message indicating the progress in order to keep the user informed as to the progress of the process that is being run.

23.   Regarding claim 13, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention substantially as claimed and described in claim 1 above, but fails to teach a visual indicator of progress of one of the plurality of stages.

Kaan teaches a visual indicator of progress of one of the plurality of stages (Kaan: Fig. 4).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include a visual indicator in order to provide information to a user via a GUI.

24.   Regarding claim 14, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention substantially as claimed and described in claim 1 above, but fails to teach a visual indicator of success or failure of one of the plurality of stages.

Kaan teaches a visual indicator of success or failure of one of the plurality of stages (Kaan: Fig 4).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include a visual indicator in order to provide information to a user via a GUI.

25.   Regarding claim 26, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 1 above, including testing whether a

communicative coupling exists between the device and the network (Li: para. [0039]),

and displaying real time status of the testing (Id.), and displaying troubleshooting

instructions (Li: para. [0006]).

         Lipinski-Li-Ramig-Dunn-Li2 fails to teach displaying success or failure indicators.

Kaan teaches such indicators (Fig.4). It would have been obvious to one of ordinary

skill in the art at the time of applicant's invention to include success and failure

indicators in order to indicate success or failure of a process to a user.

         While Lipinski-Li-Ramig-Dunn-Li2 and Kaan does not teach displaying such

indicators for each stage, and does not teach displaying troubleshooting instructions for

each stage, one of ordinary skill in the art would have found it obvious to do so.

Applying a known technique to a known method is obvious if it yields predictable results.

MPEP 2143.

26.   Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-

Li-Ramig-Dunn-Li2 as applied to claim 1 above, and further in view of U.S. Pat. No.

6,442,444 ("Matsubara").

27.   Regarding claim 17, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 1 above, but fails to teach

troubleshooting help including a serial number of the device.

However, Matsubara teaches displaying a serial number for troubleshooting (Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a serial number for troubleshooting as taught by Matsubara with motivation to easily determine the serial number.

28.   Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Li-Ramig-Dunn-Li2 as applied to claims 1 above, and further in view of U.S. Pat. No. 7,016,948 ("Yildiz").

29.   Regarding claim 20, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention substantially as claimed and described in claim 1, but fails to teach a quality of service testing stage.

However, Yildiz teaches testing for quality of service (col. 2, lines 25-45).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to measure quality of service as taught by Yildiz with motivation to maintain a minimum level of service.

30.   Regarding claim 21, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention substantially as claimed and described in claim 20, including troubleshooting includes quality of service information (Yildiz: col. 2, lines 25-45).

31.   Regarding claim 22, Lipinski-Li-Ramig-Dunn-Li2 teaches the invention

substantially as claimed and described in claim 21, including that quality of service

information including one of an upload bandwidth, a download bandwidth, a network

data packet latency, a network data packet drop rate, and a network jitter value (Yildiz:

'jitter', col. 2, lines 25-45).

32.   Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski,

and further in view of Li and Li2.

33.   Regarding claim 27, Lipinski teaches an engine comprising:

        ('IN USE?', Fig. 2);

        network settings engine to configure network settings, wherein the network

settings include a network address ('GET DHCP NETWORK SETTINGS', Fig. 2);

        a name resolution engine to associate a computing domain name with the

network address ('ENTER DNS', Fig. 2); and

        a service connection engine to communicate with a network service ('TEST

NETWORK ACCESS', Fig. 2).

        Lipinski fails to teach a communicative coupling engine to verify a communicative

coupling between a device and a network detect a physical cable connection, Li teaches

detecting a physical cable connection (Fig. 2; para. [0039]). It would have been obvious

to one of ordinary skill in the art at the time of applicant's invention to test for a physical

cable connection in order to notify a user if the physical cable is not properly connected.

Lipinski fails to teach successively applying different connection techniques upon

a failure of part of a connection process. One example given in the disclosure by

applicant is attempting PPPoE if DHCP fails. Connecting to a network using DHCP and

PPPoE were both very well known at the time of applicant's invention. In U.S. Pat. No.

6,012,088, Li2 teaches a system for automatically configuring an Internet access

device, including settings for DHCP and PPP. Applicant has simply disclosed a system

for applying a brute force trial-and-error approach to connecting to a network. The

Court has stated in a recent decision that the combination of prior art elements

according to known methods to yield predictable results would have been obvious.

MPEP 2143. Prior to applicant's invention a user that fails to connect to a network via

DHCP may well have tried to connect via other known methods, including PPPoE.

Applicant's invention has simply automated this process, and cannot be considered

novel. It would have been obvious to one of ordinary skill in the art at the time of

applicant's invention to attempt a different technique after one fails in order to automate

the process of connecting to a network.

34.   Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-

Li-Li2 as applied to claim 27 above, and further in view of Yildiz.

35.   Regarding claim 28, Lipinski-Li-Li2 teaches the invention substantially as claimed

and described in claim 27 above, but fails to teach a quality of service module to test

and record quality of service parameters in a network.

However, Yildiz teaches a quality of service module (col. 2, lines 25-45).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a quality of service module as taught by Yildiz with motivation to maintain a minimum level of service.

36.   Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Li-Li2 as applied to claim 27 above, and further in view of Li.

37.   Regarding claim 29, Lipinski teaches the invention substantially as claimed and described in claim 27 above, but fails to teach a help and troubleshooting engine to instructions in response to a connection failure.

However, Li teaches the display of real-time status and real-time troubleshooting help (para. [0006], [0039]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a troubleshooting help in the connection system of Lipinski with motivation to aid a user in troubleshooting a connection.

38.   Claims 34 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Li-Li2 as applied to claim 27 above, and further in view of Kaan.

39.   Regarding claim 34, Lipinski teaches the invention substantially as claimed and
described in claim 27 above, but fails to teach a user-interface engine to generate a
user interface for displaying a status of the connecting the device to the network.

        However, Kaan teaches a user-interface for displaying the status of connecting to
a network (Fig. 12).

        It would have been obvious to one of ordinary skill in the art at the time of
applicant's invention to employ a GUI for displaying the status as taught by Kaan with
motivation to enable a user to know the progress of connecting to a network.

40.   Regarding claim 37, Lipinski-Li-Li2-Kaan teaches the invention substantially as
claimed and described in claim 34 above, including a user interface to display error
information from an error logging engine (Kaan: para. [0088]).

41.   Claims 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over
Lipinski-Li-Li2-Kaan as applied to claim 34 above, and further in view of Li.

42.   Regarding claim 35, Lipinski-Li-Li2-Kaan teaches the invention substantially as
claimed and described in claim 34 above, but fails to teach displaying troubleshooting
instructions.

        Li teaches a user interface to display one of help and troubleshooting instructions
(Li: para. [0006]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to display troubleshooting instructions in order to not confuse the user.

43.   Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Li-Li2 as applied to claim 27 above, and further in view of U.S. Pat. No. 5,790,779 ("Ben").

44.   Regarding claim 30, Lipinski-Li-Li2 teaches the invention substantially as claimed and described in claim 27 above, but fails to teach an error logging engine to record errors during one or more connection attempts.

However, Ben teaches the aggregation of error logs (abstract).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to log errors as taught by Ben with motivation to allow a user to troubleshoot the problem.

45.   Regarding claim 31, Lipinski-Li-Li2-Ben teaches the invention substantially as claimed and described in claim 30 above, including persisting a failure record and related extended error information of a failed connection stage for uploading to a service in response to a subsequent successful connection to a network (Ben: para. [0003], [0004], [0009]).

46.   Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Lipinski-Li-Li2-Ben as applied to claim 30 above, and further in view of U.S. Pat.

No. 6,535,865 ("Skaaning").

47.   Regarding claim 32, Lipinski-Li-Li2-Ben teaches the invention substantially as

claimed and described in claim 30 above, but fails to teach that failure record and

related extended error information are uploaded for statistical treatment of multiple

connection failures.

        However, Skaaning teaches performing statistical analysis using Bayesian

networks to troubleshoot errors (col. 5, lines 30-50).

        It would have been obvious to one of ordinary skill in the art at the time of

applicant's invention to use Bayesian networks for statistical analysis of errors as taught

by Skaaning with motivation to troubleshoot more efficiently.

48.   Regarding claim 33, Lipinski-Li-Li2-Ben teaches the invention substantially as

claimed and described in claim 30 above, but fails to teach that failure record and

related extended error information are uploaded for a Bayes network to refine a

connection stage between the device and the network.

        However, Skaaning teaches performing statistical analysis using Bayesian

networks to troubleshoot errors (col. 5, lines 30-50).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use Bayesian networks for statistical analysis of errors as taught by Skaaning with motivation to troubleshoot more efficiently.

49.   Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Li-Li2 as applied to claim 34 above, and further in view of Yildiz.

50.   Regarding claim 36, Lipinski-Li-Li2 teaches the invention substantially as claimed and described in claim 34 above, but fails to teach a user interface to display quality of service information from a quality of service engine.

However, Yildiz teaches a user interface to display quality of service information from a quality of service engine (col. 8, lines 1-19).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a GUI for monitoring a quality of service as taught by Yildiz with motivation to allow a user to analyze a network graphically.

51.   Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Li-Li2 as applied to claim 27 above, and further in view of what was well known at that time of applicant's invention.

52.   Regarding claim 38, Lipinski-Li-Li2 teaches the invention substantially as claimed and described in claim 27 above, including manual connecting includes manual entry of

at least one network setting (Lipinski: 'MANUAL SETUP?', Fig. 2), but fails to teach a

mode selector to switch between automatically connecting the device and the network

and manual connecting the device and the network.

Official notice is taken that such a mode selector was well known at the time of

applicant's invention. MPEP 2144.03. On such example can be found in U.S. Pat. No.

5,579,446 (Naik, et al) (Fig 2b).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to include such a mode selector in order to allow advanced users to manually

control the operation of the system, while not overwhelming beginner users with settings

they are unfamiliar with.

53.   Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski,

and further in view of Ramig and U.S. Pat. No. 6,958,996 ("Xiong").

54.   Regarding claim 39, Lipinski teaches instructions for a method comprising:

verifying a communicative coupling between a device and a network ('IN USE?',

Fig. 2);

if the communicative coupling is verified, then obtaining an IP address using the

communicative coupling ('GET DHCP NETWORK SETTINGS', Fig. 2); and

attempting communication with an online service using the IP address or the

domain name ('TEST NETWORK ACCESS', Fig. 2).

Lipinski fails to teach that a dynamic host configuration protocol (DHCP) technique is attempted to complete the network settings stage and if the DHCP technique fails, then a point-to-point protocol over Ethernet (PPPoE) technique is automatically attempted to complete the network settings stage.

Lipinski fails to teach performing a DNS name resolution. Ramig teaches performing a DNS name resolution (para. [0047]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to perform a DNS name resolution in order to make sure the DNS is set up properly.

Lipinski fails to teach attempting to connect using PPPoE if DHCP is not successful. Connecting to a network using DHCP and PPPoE were both very well known at the time of applicant's invention. Xiong teaches connecting to a network using PPPoE or DHCP (abstract). Applicant has simply disclosed a system for applying a brute force trial-and-error approach to connecting to a network. The Court has stated in a recent decision that the combination of prior art elements according to known methods to yield predictable results would have been obvious. MPEP 2143. Prior to applicant's invention a user that fails to connect to a network via DHCP may well have tried to connect via other known methods, including PPPoE. Applicant's invention has simply automated this process, and cannot be considered novel.

55.   Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Ramig-Xiong as applied to claim 39 above, and further in view of Yildiz.

56.　　Regarding claim 40, Lipinski-Ramig-Xiong teaches the invention substantially as claimed and described in claim 39 above, but fails to teach testing quality of service parameters between the device and the online service.

However, Yildiz teaches monitoring a quality of service (col. 2, lines 25-45).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a quality of service module as taught by Yildiz with motivation to maintain a minimum level of service.

57.　　Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Xiong as applied to claim 40 above, and further in view of Li.

58.　　Regarding claim 41, Lipinski-Xiong teaches the invention substantially as claimed and described in claim 40 above, but fails to teach indicating in real-time one or more statuses of a connecting process between the device and the network, including a status for each of the verifying a communicative coupling, the obtaining an IP address, the querying a DNS, the attempting communication with an online service, and the testing quality of service parameters.

However, Li teaches the display of real-time status and real-time troubleshooting help (para. [0006], [0039]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a troubleshooting help with motivation to aid a user in troubleshooting a connection.

59.   Regarding claim 42, Lipinski-Xiong-Li teaches the invention substantially as claimed and described in claim 41 above, including displaying troubleshooting instructions associated with a part of the method whenever the part of the method is not automatically completed (Li: para. [0006]).

60.   Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Ramig-Xiong as applied to claim 39 above, and further in view of Ben.

61.   Regarding claim 43, Lipinski-Ramig-Xiong teaches the invention substantially as claimed and described in claim 39 above, but fails to teach storing a failure record and related extended error information with respect to failures in the connection stages of verifying a communicative coupling, obtaining an IP address, querying a domain name system, and attempting communication with an online service.

     However, Ben teaches the aggregation of error logs (abstract).

     It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to log errors as taught by Ben with motivation to allow a user to troubleshoot the problem.

62.   Regarding claim 44, Lipinski-Ramig-Xiong-Ben teaches the invention substantially as claimed and described in claim 43 above, including uploading the failure

record and related extended error information in response to a subsequent successful

connection to a network (Ben: para. [0003], [0004], [0009]).

63.   Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-

Ramig-Ben as applied to claim 44 above, and further in view of Skaaning.

64.   Regarding claim 45, Lipinski-Ramig-Ben teaches the invention substantially as

claimed and described in claim 44 above, but fails to teach that failure record and

related extended error information is used in a Bayes network to improve at least one of

the connection stages.

        However, Skaaning teaches performing statistical analysis using Bayesian

networks to troubleshoot errors (col. 5, lines 30-50).

        It would have been obvious to one of ordinary skill in the art at the time of

applicant's invention to use Bayesian networks for statistical analysis of errors as taught

by Skaaning with motivation to troubleshoot more efficiently.

65.   Claims 46-61, 63, 64 and 68-70 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lipinski, and further in view of Kaan, Li, and Li2.

66.   Regarding claim 46 and 68, Lipinski teaches a method comprising:

        connecting a device to a network service in a plurality of stages (Fig. 2);

        selecting one of the stages ('TEST DHCP', Fig. 2);

attempting a technique for completing the selected stage ('TEST DHCP', Fig. 2); and

if the technique is successful, then selecting a subsequent stage and attempting a technique to complete the subsequent stage (Fig. 2, 223).

Lipinski fails to teach displaying real-time status reports of attempting and of a success or a failure of a technique. Kaan teaches displaying such real time status reports (Fig. 12). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to display real time status reports to inform a user of the progress of the process.

Lipinski fails to teach displaying trouble shooting instructions if a technique is not successful and there are no more techniques available. Li teaches displaying troubleshooting instructions (para. [0006]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to display troubleshooting instructions in order to aid the user in solving the problem.

Lipinski fails to teach attempting another technique if the attempt is not successful. One example given in the disclosure by applicant is attempting PPPoE if DHCP fails. Connecting to a network using DHCP and PPPoE were both very well known at the time of applicant's invention. In U.S. Pat. No. 6,012,088, Li2 teaches a system for automatically configuring an Internet access device, including settings for DHCP and PPP. Applicant has simply disclosed a system for applying a brute force trial-and-error approach to connecting to a network. The Court has stated in a recent decision that the combination of prior art elements according to known methods to yield

predictable results would have been obvious. MPEP 2143. Prior to applicant's invention a user that fails to connect to a network via DHCP may well have tried to connect via other known methods, including PPPoE. Applicant's invention has simply automated this process, and cannot be considered novel. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to attempt a different technique after one fails in order to automate the process of connecting to a network.

67.   Regarding claim 47, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim above, including that a device connects to a network service over the Internet (Lipinski: para. [0002]).

68.   Regarding claim 48, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim 46 above, including a communicative coupling stage between the device and a network (Lipinski: 'IN USE?', Fig. 2).

69.   Regarding claim 49, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim 46 above, including a network settings stage for configuring one of a network protocol and a network address (Lipinski: 'GET DHCP NETWORK SETTINGS', Fig. 2).

70.   Regarding claim 50, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim 49 above, including a network settings stage exists as

an Internet Protocol (IP) settings stage and the network address exists as an IP address

(Lipinski: Fig. 2).

71.   Regarding claim 51, Lipinski-Kaan-Li-Li2 teaches the invention substantially as

claimed and described in claim 50 above, including one or more techniques are

attempted for completing an IP settings stage including one of a dynamic host

configuration protocol (DHCP) technique, a point-to-point protocol over Ethernet

(PPPoE) technique, and a bootstrap protocol (BOOTP) technique (Lipinski: 'DHCP', Fig.

2)

72.   Regarding claim 52, Lipinski-Kaan-Li-Li2 teaches the invention substantially as

claimed and described in claim 49 above, including a name resolution stage for

associating the network address to a network domain name (Lipinski: 'NEED NAME

SERVER?', Fig. 2).

73.   Regarding claim 53, Lipinski-Kaan-Li-Li2 teaches the invention substantially as

claimed and described in claim 52 above, including that a name resolution stage exists

as a domain name system (DNS) name resolution stage (Lipinski: 'ENTER DNS', Fig.

2).

74.   Regarding claim 54, Lipinski-Kaan-Li-Li2 teaches the invention substantially as

claimed and described in claim 46 above, including a service connection stage for

confirming communication with the network service (Lipinski: 'TEST NETWORK

ACCESS', Fig. 2).

75.   Regarding claim 55, Lipinski-Kaan-Li-Li2 teaches the invention substantially as

claimed and described in claim 46 above, including proceeding automatically between

each of the multiple stages of connecting (Lipinski: para. [0023]).

76.   Regarding claim 56, Lipinski-Kaan-Li-Li2 teaches the invention substantially as

claimed and described in claim 46 above, including that real-time status includes a

message describing one of the plurality of stages (Kaan: Fig. 12).

77.   Regarding claim 57, Lipinski-Kaan-Li-Li2 teaches the invention substantially as

claimed and described in claim 56 above, including a message describing progress of a

technique used to complete one of the plurality of stages (Kaan: paras [0072]-[0073]).

78.   Regarding claim 58, Lipinski-Kaan-Li-Li2 teaches the invention substantially as

claimed and described in claim 46 above, including a visual indicator of progress of one

of the plurality of stages (Kaan: Fig 4).

79.   Regarding claim 59, Lipinski-Kaan-Li-Li2 teaches the invention substantially as

claimed and described in claim 46 above, including a visual indicator of success or

failure of one of the plurality of stages (Kaan: Fig. 4).

80.   Regarding claim 60, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim 46 above, including troubleshooting help including instructions for completing one of the plurality of stages (Li: para. [0006]).

81.   Regarding claim 61, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim 46 above, including the troubleshooting help including instructions for completing a technique used to complete one of the plurality of stages (Li: para. [0006]).

82.   Regarding claim 63, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim 46 above, including troubleshooting help including an error log compiled during the connecting (Li: para. [0006], [0039]).

83.   Regarding claim 64, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim 46 above, including troubleshooting help including a stage during the connecting at which a failure occurred (Li: para. [0006], [0039]).

84.   Regarding claim 69, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim 68, including a network settings stage for configuring one of a network protocol for the Internet and an Internet Protocol address (Lipinski: para. [0003]).

85.   Regarding claims 70, Lipinski-Kaan-Li-Li2 teaches the invention substantially as

claimed and described in claim 69 above, but fails to teach that a dynamic host

configuration protocol (DHCP) technique is attempted to complete the network settings

stage and if the DHCP technique fails, then a point-to-point protocol over Ethernet

(PPPoE) technique is automatically attempted to complete the network settings stage.

        Connecting to a network using DHCP and PPPoE were both very well known at

the time of applicant's invention. In U.S. Pat. No. 6,012,088, Li, et al teaches a system

for automatically configuring an Internet access device, Including settings for DHCP and

PPP. Applicant has simply disclosed a system for applying a brute force trial-and-error

approach to connecting to a network. The Court has stated in a recent decision that the

combination of prior art elements according to known methods to yield predictable

results would have been obvious. MPEP 2143. Prior to applicant's invention a user

that fails to connect to a network via DHCP may well have tried to connect via other

known methods, including PPPoE. Applicant's invention has simply automated this

process, and cannot be considered novel.

86.   Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-

Kaan-Li-Li2 as applied to claim 46 above, and further in view of Matsubara.

87.   Regarding claim 62, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim 46 above, but fails to teach troubleshooting help including a serial number of the device.

        However, Matsubara teaches displaying a serial number for troubleshooting (Fig. 2).

        It would have been obvious to one of ordinary skill in the art at the time of the invention to use a serial number for troubleshooting as taught by Matsubara with motivation to easily determine the serial number.

88.   Claims 65-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Kaan-Li-Li2 as applied to claim 46 above, and further in view of Yildiz.

89.   Regarding claim 65, Lipinski-Kaan-Li-Li2 teaches the invention substantially as claimed and described in claim 46, but fails to teach a quality of service testing stage.

        However, Yildiz teaches testing for quality of service (col. 2, lines 25-45).

        It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to measure quality of service as taught by Yildiz with motivation to maintain a minimum level of service.

90.   Regarding claim 66, Lipinski-Kaan-Li-Li2-Yildiz teaches the invention substantially as claimed and described in claim 65, including troubleshooting includes quality of service information (Yildiz: col. 2, lines 25-45).

91.   Regarding claim 67, Lipinski-Kaan-Li-Li2-Yildiz teaches the invention

substantially as claimed and described in claim 66 above, including that quality of

service information including one of an upload bandwidth, a download bandwidth, a

network data packet latency, a network data packet drop rate, and a network jitter value

(Yildiz: 'jitter', col. 2, lines 25-45).

Response to Arguments

92.   Applicant's arguments filed 01/25/08 have been fully considered but they are not

persuasive.

        a.   With regard to claims 6 and 51, applicant argues that Lipinski does not

        teach completing an IP settings stage using one of a DHCP, PPPoE and

        BOOTP. Lipinski clearly teaches obtaining IP settings using DHCP. (Fig. 2).

        Since the different techniques claimed in claims 6 and 51 are claimed in the

        alternative, Lipinski teaches the additional limitations of claims 6 and 51.

        b.   With regard to claim 28, applicant argues that Yildiz does not teach a QoS

        module in connection with a staged connection process. In response to

        applicant's arguments against the references individually, one cannot show

        nonobviousness by attacking references individually where the rejections are

        based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

        USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375

        (Fed. Cir. 1986). Yildiz was introduced to show a QoS module. Connecting to a

network in multiple stages or attempts was already shown as obvious in the rejection of claim 27. Applicant has not argued that the module in Yildiz is not a QoS module.

c.   With regard to claim 30, applicant argues that Ben teaches logging errors, but does not teach logging errors during one or more connection attempts. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Ben was introduced to show that logging errors was well known in the art. Connecting to a network in multiple stages or attempts was already shown as obvious in the rejection of claim 27.

d.   With regard to claim 32, applicant argues that Skaaning teaches error handling using Bayesian networks, but does not teach doing so for multiple connection failures within different stages. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Skaaning was introduced to show that the statistical treatment of errors was well known in the art. Connecting to a network in multiple stages or attempts was already shown as obvious in the rejection of claim 27. Moreover, in response to applicant's

argument that the references fail to show certain features of applicant's invention,

it is noted that the features upon which applicant relies (i.e., multiple connection

failures within different stages) are not recited in the rejected claim(s). Although

the claims are interpreted in light of the specification, limitations from the

specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181,

26 USPQ2d 1057 (Fed. Cir. 1993).

e.   With regard to claim 30, applicant argues that Ben teaches logging errors,

but does not teach logging errors during one or more connection attempts. In

response to applicant's arguments against the references individually, one

cannot show nonobviousness by attacking references individually where the

rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231

USPQ 375 (Fed. Cir. 1986). Ben was introduced to show that logging errors was

well known in the art. Connecting to a network in multiple stages or attempts

was already shown as obvious in the rejection of claim 27.

f.   With regard to claims 14 and 59, applicant argues that Kaan does not

teach a visual indicator as to the success or failure of a stage. In the broadest

reasonable interpretation, anything that is displayed to the user can be

considered a "visual indicator". In figure 4, Kaan depicts a GUI that includes text

indicating the success of a stage, including obtaining an IP address.

g.   Any arguments not addressed here are moot in view of the new grounds

of rejection presented above.

Conclusion

93.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to JULIAN CHANG whose telephone number is (571)272-8631. The examiner can normally be reached on Monday thru Friday 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC

/Bunjob Jaroenchonwanit/
Supervisory Patent Examiner, Art Unit 2152